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AGILENT TECHNOLOGIES, INC.  
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EXAMINER

FORMAN, BETTY J

ART UNIT	PAPER NUMBER
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1634

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/919,555

Applicant(s)

CATTELL ET AL.

Examiner

BJ Forman

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-16 and 45-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-16 and 45-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

#### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 April 2007 has been entered.

#### ***Status of the Claims***

2. This action is in response to papers filed 18 April 2007 in which claims 1-2 10, 47, 48 were amended. The amendments have been thoroughly reviewed and entered.

The previous rejections in the Office Action dated 20 December 2006, not reiterated below, are withdrawn in view of the amendments. Applicant's arguments have been thoroughly reviewed and are discussed below as they apply to the instant grounds for rejection. New grounds for rejection are discussed.

Claims 1-2, 4-16, 45-54 are under prosecution.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-2, 4-16, 45-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 45 are further indefinite in Claim 1, step (a) for the recitations "the moieties", "the substrate" and "the array" because the recitations lack proper antecedent basis

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in Claim 1. It is suggested that Claim 1 be amended to provide proper antecedent basis e.g. replace "the" with "a".

Claims 2, 4-9 and 46 are indefinite in Claim 2, step (a) for the recitations "the moieties", "the substrate" and "the array" because the recitations lack proper antecedent basis in Claim 1. It is suggested that Claim 2 be amended to provide proper antecedent basis e.g. replace "the" with "a".

Claims 10-16 are indefinite in Claim 10, step (b) for the recitation "the array" because the recitation lacks proper antecedent basis in Claim 10. It is suggested that Claim 10 be amended to provide proper antecedent basis e.g. replace "the" with "an".

Claim 47 is indefinite in step (a) for the recitations "the moieties", "the substrate" and "the array" because the recitations lack proper antecedent basis in the claim. It is suggested the claim be amended to provide proper antecedent basis e.g. replace "the" with "a".

Claims 48-54 are indefinite in Claim 48, step (a) for the recitations "the moieties", "the substrate" and "the array" because the recitations lack proper antecedent basis in Claim 48. It is suggested that Claim 48 be amended to provide proper antecedent basis e.g. replace "the" with "a".

#### **Response to Comments**

5. Applicant asserts that the amendments are addressed by the amendments. However, above rejections reiterated from the previous office action have not been addressed by either the amendments or comments.

#### ***Claim Interpretation***

6. The independent claims include step d)

(a) In a processing unit:

(i) retrieving said array related data from said memory; and

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(ii) automatically selecting one or more machine readable algorithms for how to read an array or machine readable algorithms for how to process data from an array following reading of the array based on said retrieved array related data.

The method steps of "in a processing unit", retrieving data from a memory and selecting machine readable algorithms. The algorithms are instructions for how to read an array.....or in the alternative, how to read machine readable algorithms for how to process data from an array following reading of the array based on the retrieved data.

The previously appealed claims (and instant claims) include language similar to that currently added. The language addressed by the Board is the following: "data which comprises instructions for selecting one or more machine readable algorithms for use by a processor on how to read an array or machine readable algorithms for use by a processor on how to process data from an array following reading of the array". The Board determined that the phrase is not entitled to patentable weight for two reasons. First, the data is analogous to unpatentable printed matter because it does not functionally change the memory in which the data are saved. Second, because the claim does not specify that the processor uses the data, the phrase merely states an intended use of the data for the processor.

On pages 8-9 of the Board Decision, the Board Stated"

the phrase "which comprises instructions for selecting one or more machine readable algorithms for use by a processor on how to read an array or machine readable algorithms for use by a processor on how to process data from an array following reading of the array" is not entitled to patentable weight for two reasons.

First, we view the "data which comprises instructions for selecting one or more machine readable algorithms for use by a processor on how to read an array or machine readable algorithms for use by a processor on how to process data from an array following reading of the array" as analogous to unpatentable printed-matter. "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability." In re Ngai, 367 F.3d 1336, 1339, 70 USPQ2d 1862, 1864 (Fed. Cir. 2004) (quoting In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401,404 (Fed.Cir.1983)). "Although the

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printed matter must be considered, in that situation it may not be entitled to patentable weight." Gulack, 703 F.2d at 1385, 217 USPQ at 404.

Here, because the data that "comprises instructions for selecting one or more machine readable algorithms for use by a processor on how to read an array or machine readable algorithms for use by a processor on how to process data from an array following reading of the array" do not functionally change the (claimed) memory in which the data are saved, the data lack a functional relation thereto. Therefore, the phrase is not entitled to patentable weight.

Second, "[a]n intended use or purpose usually will not limit the scope of the claim because such statements usually do no more than define a context in which the invention operates." *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345, 65 USPQ2d 1961, 1965 (Fed.Cir. 2003). Although "[s]uch statements often... appear in the claim's preamble," *In re Stencel*, 828 F.2d 751, 754, 4 USPQ2d 1071, 1073 (Fed. Cir. 1987), a statement of intended use or purpose can appear elsewhere in a claim. *Id.*, 4 USPQ2d at 1073.

Here, because the representative claim recites "[a] method for generating an addressable array," we agree with the examiner's aforementioned observation that the claim recites a method of making an array rather than a method of using the array. Because claim 1 does not specify that the claimed processor actually uses the data to perform any function, the claimed phrase "which comprises instructions for selecting one or more machine readable algorithms for use by a processor on how to read an array or machine readable algorithms for use by a processor on how to process data from an array following reading of the array" (emphasis added) merely states an intended use of the data by the processor. Therefore, the phrase is not entitled to patentable weight..... Giving the representative claim its broadest, reasonable construction, the limitations require saving some sort of data in a memory and forwarding the data to a location remote from where an array is fabricated. We will use this interpretation in deciding all the rejections at issue.

The same analysis is applicable to the added language of the current claims. The method includes steps of "in a processing unit", retrieving data from a memory and selecting machine-readable algorithms. The algorithms are instructions for how to read an array.....or in the alternative, how to read machine readable algorithms for how to process data from an

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array following reading the of the array based on the retrieved data. Using the analysis of the Board, the phrase "algorithms for how to read an array or machine readable algorithms for how to process data from an array following reading of the array based on said retrieved array related data" is not entitled to patentable weight because the algorithms do not functionally change the processing unit from which the algorithms are selected and because the claim does not require use of the algorithms so as to functionally alter the method.

The amendments of 18 April 2007 add the further step at a user location, e) reading the array according to an algorithm or f) processing data form reading the array. Data processing and reading according to an algorithm do not result in a physical transformation or provide a tangible result.

As such the amendment is interpreted as merely requiring the method steps of retrieving data and selecting algorithms at a user location.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 2, 4-16, 45-54 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by Cattell (U.S. Patent Application Publication No. 2002/0102559, filed 31 January 2001).

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The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claim 1 and 47, Cattell discloses a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample saving in a memory array related data comprising machine readable (e.g. bar code, ¶ 40) instructions for reading the array and/or instruction of processing the array; and shipping the fabricated array and forwarding the array related data to a location remote from where the array is fabricated (¶ 6) wherein the instructions for reading or processing the array includes information regarding feature errors which are detected, communicated to the fabrication station and added to the memory before subsequent users expose the arrays to a sample (¶ 45 and Fig. 6) wherein during array fabrication information required for reading and processing the array (e.g. missing features, misplaced feature, features of incorrect dimension, other physical characteristics) is stored such that the person reading data from the array will interpret the data correctly (¶ 5, 11, 15, 41, 45).

Cattell further discloses retrieving array related data from a memory (e.g. updated feature characteristics) and automatically selecting algorithms based on the data (e.g. skip a updated feature) and at the user station, reading the array according to the algorithms (¶ 43-44).

Regarding Claim 2 and 48, Cattell discloses a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a

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sample saving in a memory array related data comprising machine readable (e.g. bar code, ¶ 40) instructions for reading the array or instruction of processing the array; wherein array related data is saved in association with an identifier (i.e. bar code, ¶ 40); applying the identifier to the substrate or housing carrying the substrate; and shipping the fabricated array and forwarding the array related data to a remote location (¶ 39-41) wherein the instructions for reading or processing the array includes information regarding feature errors which are detected, communicated to the fabrication station and added to the memory before subsequent users expose the arrays to a sample (¶ 45 and Fig. 6) and wherein during fabrication information required for reading and processing the array (e.g. missing features, misplaced feature, features of incorrect dimension, other physical characteristics) is stored such that the person reading data from the array will interpret the data correctly (¶ 5, 11, 15, 41, 45).

Cattell further discloses retrieving array related data from a memory (e.g. updated feature characteristics) and automatically selecting algorithms based on the data (e.g. skip a updated feature) and at the user station, reading the array according to the algorithms (¶ 43-44).

Regarding Claim 4 and 49, Cattell discloses the method wherein the chemical moieties are biopolymers (¶ 24).

Regarding Claim 5 and 50, Cattell discloses the method wherein the biopolymers are DNA (¶ 24).

Regarding Claim 6 and 51, Cattell discloses the method wherein the memory is a database and the method additionally comprises retrieving the array related data from the memory and communicating the retrieved data to a remote location in response to receiving a communication of the identifier from the remote location (¶ 36- 40).

Regarding Claim 7 and 52, Cattell discloses the method wherein the memory comprises a portable storage medium, the method further comprising shipping the portable medium to a remote location e.g. bar codes illustrated in Fig. 1, # 356 and 358 (¶ 40 and Fig. 6).

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Regarding Claim 8 and 53, Cattell discloses the method wherein the portable storage medium is shipped to the same remote location as the array (§ 40 and Fig. 6).

Regarding Claim 9 and 54, Cattell discloses the method further comprising applying a communication address to the substrate or housing wherein the address identifies a remote location from which the identity map will be communicated in response to a received communication of the associated map identifier (§ 40).

Regarding Claim 10, Cattell discloses a method of generating, at a central fabrication station, an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample saving in a memory array related data said data comprising machine readable (e.g. bar code, § 40) instructions for reading the array or instruction of processing the array; wherein array related data is saved in association with a map identifier; applying the identifier to the corresponding substrate or housing carrying the corresponding substrate; and shipping the fabricated array and forwarding the array related data to a remote location (§ 27 and 40) and wherein during fabrication information required for reading and processing the array (e.g. missing features, misplaced feature, features of incorrect dimension, other physical characteristics) is stored such that the person reading data from the array will interpret the data correctly (§ 5, 11, 15, 41, 45).

Cattell further discloses retrieving array related data from a memory (e.g. updated feature characteristics) and automatically selecting algorithms based on the data (e.g. skip a updated feature) and at the user station, reading the array according to the algorithms (§ 43-44).

Regarding Claim 11, Cattell discloses the method wherein the chemical moieties are biopolymers (§ 24).

Regarding Claim 12, Cattell discloses the method wherein the biopolymers are DNA (§ 24).

Regarding Claim 13, Cattell discloses the method wherein the memory is a database the method additionally comprising retrieving the array related data for arrays from the memory and communicating the data to a remote locations in response to receiving a communication of associated identifiers from the remote location (§ 36-40).

Regarding Claim 14, Cattell discloses the method wherein for each of the multiple array the corresponding identify map and associated identifier are saved on a memory comprising a portable computer readable storage medium the method additionally comprising shipping the portable storage mediums to multiple remote locations (§ 40 and Fig. 6).

Regarding Claim 15, Cattell discloses the method wherein each of the portable storage mediums are shipped with the corresponding fabricated array to the same remote location from which the set of biopolymers used in fabricating the array was received (§ 40 and Fig. 6).

Regarding Claim 16, Cattell discloses the method further comprising applying a same communication address to each of the substrates or housings wherein the address identifies a remote location from which the identity map will be communicated in response to a received communication of the associated map identifier (§ 40).

Regarding Claim 45-46, Cattell discloses the method wherein the array related data includes an indication as to whether a particular type of control probe is present i.e. the data includes "any biological information on an array feature" (§ 39 e.g. complement). Because a control probe is biological and because the data of Cattell includes any biological information, the data of Cattell includes an indication as to whether a particular type of control probe is present.

9. Claims 1, 2, 4-16 and 47-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Cattell, H. (U.S. Patent No. 6,180,351, filed 22 July 1999).

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The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claim 1 and 47, Cattell discloses a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array (Column 2, line 60-Column 3, line 5 and Claim 1); before the array has been exposed to a sample saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 5, lines 41-48); and shipping the fabricated array and forwarding the array related data to a remote location (Column 3, line 55-Column 4, line 9 and 33-43 and Claims 10-11) and wherein the array comprises machine readable identifier containing information regarding processing and/or reading the array (Column 5, lines 41-48 and Column 12, lines 18-35).

Cattell further discloses retrieving array related data from a memory (e.g. unique identifier) and automatically selecting algorithms based on the data (e.g. skip a specific address) (Column 11, line 61-Column 12, line 35). Cattell further teaches reading the array and processing data at the user location (Column 11, line 61-Column 12, line 35).

Regarding Claim 2 and 48, Cattell discloses a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array (Column 2, line 60-Column 3, line 5 and Claim 1); before the array has been exposed to a sample saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 5, lines 41-48; wherein array related data is saved in association with an identifier (Column 4, lines 33-43); associating the identifier with the array (Column 4, lines 34-37 and

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Claim 12); and shipping the fabricated array and forwarding the array related data to a remote location (Column 3, line 55-Column 4, line 9 and Claims 10-11) and applying the identifier to the substrate or housing carrying the substrate (Column 3, line 64-Column 4, lines 2) and wherein the array comprises machine readable identifier containing information regarding processing and/or reading the array (Column 5, lines 41-48 and Column 12, lines 18-35).

Cattell further discloses retrieving array related data from a memory (e.g. unique identifier) and automatically selecting algorithms based on the data (e.g. skip a specific address) (Column 11, line 61-Column 12, line 35). Cattell further teaches reading the array and processing data at the user location (Column 11, line 61-Column 12, line 35).

Regarding Claim 4 and 49, Cattell discloses the method wherein the chemical moieties are biopolymers (Column 2, lines 60-64 and Claim 3).

Regarding Claim 5 and 50, Cattell discloses the method wherein the biopolymers are DNA (Column 2, lines 60-64 and Claim 4).

Regarding Claim 6 and 51, Cattell discloses the method wherein the memory is a database and the method additionally comprises retrieving the array related data from the memory and communicating the retrieved data to a remote location in response to receiving a communication of the identifier from the remote location (Column 3, lines 28-43 and Column 12, lines 39-43).

Regarding Claim 7 and 52, Cattell discloses the method wherein the memory comprises a portable storage medium, the method further comprising shipping the portable medium to a remote location e.g. bar codes illustrated in Fig. 4, # 356 and 358 (Column 9, lines 65-Column 10, line 4).

Regarding Claim 8 and 53, Cattell discloses the method wherein the portable storage medium is shipped to the same remote location as the array (Column 9, lines 65-Column 10, line 4).

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Regarding Claim 9 and 54, Cattell discloses the method further comprising applying a communication address to the substrate or housing wherein the address identifies a remote location from which the identity map will be communicated in response to a received communication of the associated map identifier (Column 10, line 65-Column 50).

Regarding Claim 10, Cattell discloses a method of generating, at a central fabrication station, an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array (Column 2, line 60-Column 3, line 5 and Claim 1); before the array is exposed to a sample saving in a memory array related data said data comprising, instructions for reading the array or instruction of processing the array (Column 5, lines 41-48); wherein array related data is saved in association with a map identifier (Column 4, lines 33-43); applying the identifier to the corresponding substrate or housing carrying the corresponding substrate (Column 4, lines 34-37 and Claim 12); and shipping the fabricated array and forwarding the array related data to a remote location (Column 3, line 55-Column 4, line 9 and Claims 10-11 and Claim 14) and wherein the array comprises machine readable identifier containing information regarding processing and/or reading the array (Column 5, lines 41-48 and Column 12, lines 18-35).

Cattell further discloses retrieving array related data from a memory (e.g. unique identifier) and automatically selecting algorithms based on the data (e.g. skip a specific address) (Column 11, line 61-Column 12, line 35). Cattell further teaches reading the array and processing data at the user location (Column 11, line 61-Column 12, line 35).

Regarding Claim 11, Cattell discloses the method wherein the chemical moieties are biopolymers (Column 2, lines 60-64 and Claim 3).

Regarding Claim 12, Cattell discloses the method wherein the biopolymers are DNA (Column 2, lines 60-64 and Claim 4).

Regarding Claim 13, Cattell discloses the method wherein the memory is a database the method additionally comprising retrieving the array related data for arrays from the memory

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and communicating the data to a remote locations in response to receiving a communication of associated identifiers from the remote location (Column 3, lines 28-43 and Column 12, lines 39-43).

Regarding Claim 14, Cattell discloses the method wherein for each of the multiple array the corresponding identify map and associated identifier are saved on a memory comprising a portable computer readable storage medium the method additionally comprising shipping the portable storage mediums to multiple remote locations (Column 9, lines 65-Column 10, line 52 and Claim 14)

Regarding Claim 15, Cattell discloses the method wherein each of the portable storage mediums are shipped with the corresponding fabricated array to the same remote location from which the set of biopolymers used in fabricating the array was received (Column 3, line 55-Column 4, line 10).

Regarding Claim 16, Cattell discloses the method further comprising applying a same communication address to each of the substrates or housings wherein the address identifies a remote location from which the identity map will be communicated in response to a received communication of the associated map identifier (Column 10, line 65-Column 50 and Claim 14 (d) shipping each of the fabricated arrays....to one or more of the remote locations, lines 36-63).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 1, 2, 4-16 and 47-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perttunen et al (U.S. Patent No. 5,968,728, issued 19 October 1999) in view of Ellison et al (U.S. Patent Application Publication No. 2002/0086319A1, filed 13 November 2000).

Regarding Claim 1 and 47, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2).

Regarding Claim 2 and 48, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different

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regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array related data is saved in association with an identifier i.e. id code; wherein the identifier is associated with the array by applying the identifier to the substrate or housing carrying the substrate (Column 4, line 61-Column 5, line 7 and Fig. 10-12) (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2).

Regarding Claim 4 and 49, Perttunen et al teach the method wherein the chemical moieties are biopolymers (Column 4, lines 13-26).

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Regarding Claim 5 and 50, Perttunen et al teach the method wherein the biopolymers are DNA (Column 4, lines 13-26).

Regarding Claim 6 and 51, Perttunen et al teach the method wherein the memory is a database and the method additionally comprises retrieving the array related data from the memory and communicating the retrieved data to a remote location in response to receiving a communication of the identifier from the remote location (Column 8, lines 38-54).

Regarding Claim 7 and 52, Perttunen et al teach the method wherein the memory comprises a portable storage medium e.g. bar code, the method further comprising shipping the portable medium to a remote location to the end user (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146).

Regarding Claim 8 and 53, Perttunen et al teach the method wherein the portable storage medium is shipped to the same remote location as the array i.e. user (Column 8, lines 35-42).

Regarding Claim 9 and 54, Perttunen et al teach the method wherein the substrate has applied thereto array related data e.g. identification code (Column 8, lines 1-19) but they do not teach the identification code comprises a communication address. However, Ellison et al teach the similar method of generating an array wherein the array has applied thereto identification code including a communication address from with the identity map will be communicated i.e. customer (§ 8) wherein the address on the substrate identifies customer and/or billing information. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the communication address as taught by Ellison et al in the identification code on the substrate of Perttunen et al to thereby identify customer via the address as taught by Ellison et al (§ 8).

Regarding Claim 10, Perttunen et al teach a method of generating, at a central fabrication station, an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array;

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before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array related data is saved in association with an identifier i.e. id code; applying the identifier to the corresponding substrate or corresponding housing (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2).

Regarding Claim 11, Perttunen et al teach the method wherein the chemical moieties are biopolymers (Column 4, lines 13-26).

Regarding Claim 12, Perttunen et al teach the method wherein the biopolymers are DNA (Column 4, lines 13-26).

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Regarding Claim 13, Perttunen et al teach the method wherein the memory is a database the method additionally comprising retrieving the array related data for arrays from the memory and communicating the data to a remote locations in response to receiving a communication of associated identifiers from the remote location Column 8, lines 38-54).

Regarding Claim 14, Perttunen et al teach the method wherein for each of the multiple array the corresponding identify map and associated identifier are saved on a memory comprising a portable computer readable storage medium wherein the array is used by an end user (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) but they do not specifically teach shipping the portable storage mediums to multiple remote locations. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Regarding Claim 15, Perttunen et al teach the method wherein each of the portable storage mediums and the corresponding fabricated array are used by the at the same remote location i.e. end user from which the set of biopolymers used in fabricating the array was received (Column 7, line 40-Column 8, line 62).

Regarding Claim 16, Perttunen et al teach the method wherein each of the substrates comprise an identification code which identifies array related data e.g. identification code (Column 8, lines 1-19) but they do not teach the identification code comprises a

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communication address. However, Ellison et al teach the similar method of generating an array wherein the array has applied thereto identification code including a communication address from with the identity map will be communicated i.e. customer (§ 8) wherein the address on the substrate identifies customer and/or billing information. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the communication address as taught by Ellison et al in the identification code on the substrate of Perttunen et al to thereby identify customer proving the array samples via the address as taught by Ellison et al (§ 8) for the obvious benefits of maintaining correct correlations between the customer and the array.

12. Claims 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perttunen et al (U.S. Patent No. 5,968,728, issued 19 October 1999) in view of Ellison et al (U.S. Patent Application Publication No. 2002/0086319A1, filed 13 November 2000) as applied to Claims 1 and 2 above and further in view of Zelany et al (U.S. Patent No. 6,215,894, filed 26 February 1999).

Regarding Claims 45 and 46, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al

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teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al teach the method wherein the array related data generates mappings of the array and directs operation of the scanning system (Column 3, lines 54-67) but they do not specifically teach that the data includes an indication as to whether a particular type of control probe is present on the array. However, control probes were well known in the art at the time the claimed invention was made as taught by Zelany et al who teach that the control probes are useful for calibrating and adjusting the scanner thereby facilitating scanning (Column 3, lines 19-25). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the data of Perttunen et al by including data as to whether a control probe is present on the array for the expected benefit of adjusting and calibrating the scanner as taught by Zelany et al (Column 3, lines 19-25).

### **Response to Arguments**

13. Applicant asserts that none of the cited references teach the newly claimed method steps. However, it is maintained that the reading and/or data processing at user locations is either anticipated or obviated as cited above.

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### Conclusion

14. No claim is allowed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

  
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Art Unit: 1634  
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